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ABSTRACT

Attachment theory asserts that human beings are innately programmed to seek and form attachments with others. The assumption that the quality of early attachment relationships will be functionally related to subsequent attachment styles and competencies provides the theoretical basis for extending the theory of attachment to the study of adult personality and relationships. This review considers conceptual distinctions among the different measures of attachment and reviews and critiques the reliability and validity of scores on selected measures of adult attachment. The following instruments are considered: (1) Attachment Style Measure; (2) Adult Attachment Scale; (3) Attachment Interview; (4) Relationship Scales Questionnaire; (5) Measure of Insecure Attachment; (6) Inventory of Parent and Peer Attachment; (7) Parental Bonding Instrument; (8) Parental Attachment Questionnaire; (9) Bell Object Relations Inventory; (10) Attachment Style Questionnaire; and (11) Adult Attachment Interview. The analysis reveals that these measures each reflect different conceptions of adult attachment patterns and testing strategies. They differ in content domains assessed and in the specificity with which attachment representations are defined. Self-report measures may be more subject to defensive distortions, while interview-type measures may be more sensitive measures of adult attachment. (Contains 1 table and 36 references.) (Author/SLD)

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A Review of the Psychometric Properties of Selected Attachment Instruments

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Paper presented at the 19th annual meeting of the Southwest Educational Research Association, New Orleans, LA, January 26, 1996.

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Abstract

Increased interest in Attachment theory (Ainsworth, 1979, 1989; Bowlby, 1977, 1982, 1988) and attachment-based concepts has led to the development of many instruments designed to assess patterns of attachment and to explore the relation of such patterns to emotional adjustments and developmental histories (Lyddon, Bradford & Nelson, 1993).

A review of the current literature on eleven measures of attachment, including a comparison of internal and test-retest reliabilities, as well as a discussion of concurrent and discriminate validity studies is presented in the present paper. A comparison of factor analyses of the underlying constructs is included. Considerations for the selection and use of these attachment instruments is addressed.

According to attachment theory (Bowlby, 1969), human beings are innately programmed to seek and form attachments with others. The theory assumes that the developing infant's early attachment-related experiences are in time represented cognitively as an internal working model of self and other. This internal model carries an internalized set of beliefs that integrate perceptions of one's own competence and love worthiness (model of the self) with expectations of the availability and responsiveness of attachment figures (model of other). Bowlby (1969) and Ainsworth (1989) recognized that attachment bonds exert a powerful and enduring influence on human behavior. Because this effect on cognition will presumably long bias the individual's perception, information processing, and interpersonal behavior, producing schema-consistent experiences, early attachment models are assumed to function as prototypes for later social relations. The assumption is that the quality of early attachment relationships will be functionally related to subsequent attachment styles and competencies. This assumption provides the conceptual basis for extending the theory of attachment to the study of adult personality and adult relationships (Lopez, 1995).

There have been a number of psychometric instruments developed in recent years to measure the construct of adult attachment. The purpose of the present review is to consider conceptual distinctions between the different measures of attachment and to review and critique the reliability and validity of scores on selected measures of adult attachment. To clarify the nature of the construct of attachment, attachment is defined as a close, enduring affectional bond or relationship between two persons (Ainsworth, 1989). The presence of these bonds is assumed to promote human development throughout the

life span by providing recipients with emotional support and a sense of closeness and continuity (Bowlby, 1969).

Only the following types of measures were reviewed: (a) Self-Report and Interview type measures of adult attachment; (b) Measures that have been developed, validated and used with normal (nonpsychiatric) samples; (c) Measures that have been used in subsequent studies. In conducting the present review, particular attention was given to the underlying theoretical basis of the instrument and the psychometric properties (reliability and validity) of instrument scores. The commonalities, differences, and limitations among the selected measures are discussed. Eleven instruments were included in this analysis: The Attachment Style Measure (Hazan & Shaver, 1987); the Adult Attachment Scale (Collins & Read, 1990); the Attachment Interview (Bartholomew & Horowitz, 1991); the Relationship Scales Questionnaire (Bartholomew & Horowitz, 1991); the Measure of Insecure Attachment (West & Sheldon, 1988); the Inventory of Parent & Peer Attachment (Armsden & Greenberg, 1987); the Parental Bonding Instrument (Parker, Tupling, & Brown, 1979); the Parental Attachment Questionnaire (Kenny, 1987); the Bell Object Relations Inventory (Bell, Billington, & Becker, 1986); the Attachment Style Questionnaire (Feeney, Noller, & Hanrahan, 1994); and the Adult Attachment Interview (Kaplan & Main, 1985). Nine of these are self-report instruments, while two are interview measures. A comparison of the reliabilities of scores from the instruments is delineated in Table 1.

The Attachment Style Measure (Hazan & Shaver, 1987) defines adult attachment in terms of internal representations or models that guide interpersonal behavior

and information processing, as well as characteristic strategies that individuals use to maintain felt security (Bartholomew, 1994). Hazan and Shaver (1987) proposed that adult propensities toward love are grounded in the attachment styles formed in infancy and adulthood. A single-item measure of the three attachment styles was designed by translating Ainsworth et al.'s (1978) descriptions of infants into terms appropriate to adult love. The measure includes 13 statements constituting three attachment style descriptions--each one corresponding to a hypothesized attitude toward emotional closeness in romantic relationships in general. The frequencies of the three attachment styles in Hazan and Shaver's (1987) study were 56% Secure, 25% Avoidant, and 19% Anxious/Ambivalent.

Hazan and Shaver reported no reliability data for their instrument, however, Vacha-Haase et al. (1994) found moderate reliabilities for scores on the three scales, reporting coefficient alphas of .45 to .64. Chongruska (1994) reported a coefficient alpha of .45 for the measure. Pistole (1989) found that a test-retest analysis (1-week interval) applied to the categorical data produced a contingency coefficient of .598. Levy and Davis (1988) found test-retest reliabilities for the three scales (2 week delay) to be .48 to .65. A factor analysis of the 13 statements has yielded three factors that Hazan and Shaver (1987) termed "comfort with closeness, concern about insufficient closeness, and discomfort with closeness." Intercorrelations among the subscales indicated a negative correlation between Secure and Anxious (-.53), a weak negative correlation between Secure and Anxious-Ambivalent (-.12), and essentially no correlation between Anxious and Anxious-Ambivalent (.04).

Discriminant function analysis showed that the combination of responses to the individual items successfully predicted categorical responses to the original measure. In an assessment of scores on the validity of the test, correlations between attachment styles and a relationship rating form was done by Levy and Davis (1988). Secure was positively associated with Intimacy, Passion and Satisfaction. Anxious/Ambivalent was negatively associated with Viability, Intimacy, Care and Satisfaction and positively associated with Conflict/Ambivalence. Avoidant was negatively related to Intimacy, Care, Commitment, and Satisfaction and positively related to Conflict/Ambivalence. In an analysis of trait and state loneliness scores for each of the three attachment groups in Study 2 (Hazan & Shaver, 1987), the highest scores were obtained by the anxious/ambivalent subjects and the lowest scores by the secure subjects. Avoidant subjects indicated high state loneliness, but lower trait loneliness scores. Additionally, Hazan and Shaver (1987) reported that the proportions of the sample within each category in their studies were consistent with proportions reported in infant-mother studies.

The Adult Attachment Scale (Collins & Read, 1990) is based on Hazan and Shaver's adult attachment descriptions and additional characteristics of the three attachment styles, with a total of 21 items--7 for each style. Factor Analysis revealed that three dimensions underlie the attachment styles--Depend, Anxiety, and Close.

An internal reliability analysis indicated a reasonable Cronbach's alpha for scores on the three scales (.69 to .75). Chongruska (1994), in a later study, found moderately high Cronbach's alpha of .78 to .85. According to Collins and Read (1990), test-retest (2 month delay) reliability for scores on the three scales was moderate (.52 to .71). An

intercorrelational analysis by Collins and Read (1990) indicated that Depend and Close were moderately correlated (.38), suggesting that people who felt they could depend on others tended to be more comfortable with getting close. Anxiety was weakly correlated with Depend (-.24) and not at all correlated to Close (-.08).

Discriminant Function analysis indicated that a person with a secure attachment style was comfortable with closeness, able to depend on others, and not worried about being abandoned or unloved. An avoidant individual was uncomfortable with closeness and intimacy, not confident in others' availability and not particularly worried about being abandoned. Finally, an anxious person was comfortable with closeness, fairly confident in the availability of others, but very worried about being abandoned and unloved (Collins & Read, 1990).

Cluster analysis revealed that subjects with high scores on Close and Depend coupled with low scores on Anxiety appeared to have a secure attachment style. High scores on Anxiety coupled with moderate scores on Close and Depend, appeared to have an anxious attachment type. Low scores on Close, Depend, and Anxiety suggested this may be an avoidant cluster (Collins & Read, 1990).

The Attachment Interview (Bartholomew & Horowitz, 1991) is a semi-structured interview which lasts approximately 60 minutes. The interviewer asks subjects to describe their friendships, romantic relationships, and feelings about the importance of close relationships. If subjects had not been involved in a romantic relationship, they were asked for the reasons. They were asked about loneliness, shyness, their degree of trust of others, their impressions of others evaluations of themselves, and their hopes for any

changes in their social lives. Four prototypes were developed. First, Secure is characterized by a capacity to maintain close relationships without losing personal autonomy, and a coherence and thoughtfulness in discussing relationships and related issues. Second, Preoccupied is characterized by overinvolvement in close relationships, a dependence on other people's acceptance for a sense of personal well-being, and incoherence and emotionality in discussing relationships. Third, Dismissing is characterized by a downplaying of the importance of close relationships, restricted emotionality, an emphasis on independence and self-reliance, and a lack of clarity or credibility in discussing relationships. Fourth, Fearful is characterized by an avoidance of close relationships because of a fear of rejection, a sense of personal insecurity, and a distrust of others.

On the basis of interview audio recordings, three raters independently rated each subject on four 9-point scales describing the subject's degree of correspondence with each of the four prototypes. A set of criteria describes each prototype, and the rater is instructed to judge how well a subject's responses match each of the prototypic descriptions.

Frequency distributions of the sample indicated 47% secure (positive models of self and others), 18% dismissing (positive models of self and negative models of others), 14% preoccupied (negative models of self and positive models of others), and 21% fearful (negative models of self and others). Interview attachment ratings in opposing positions were negatively correlated: Secure and Fearful (-.55); Preoccupied and Dismissing (-.50). Alpha coefficients assessing the reliability of the prototype ratings ranged from .87 to .95.

A discriminant analysis was performed to assess the degree to which the various interview ratings accounted for the overall discrimination between the four attachment groups. The analysis resulted in correct classification of 85% of the secure group, 94% of the fearful group, and 100% of both the preoccupied and dismissing groups.

In study 2, subjects were tested in sessions that were 1 to 2 weeks apart. The first half of the interview focused on the subject's representations of family relationships. The second half of the interview was an abbreviated version of the interview previously described. The reliabilities of the family ratings ranged from .75 to .86, and those of the peer ratings ranged from .74 to .88.

For the family ratings, the correlation between the secure and fearful ratings was -.65, and between the preoccupied and dismissing ratings was -.54. For the peer ratings, the correlation between the secure and fearful ratings was -.39, and between the preoccupied and dismissing ratings was -.47. Corresponding family ratings and peer ratings were correlated with one another as follows on the constructs: Secure (.39); fearful (.29); preoccupied (.66); dismissing (.41).

In a correlational analysis of the Family Interview, Peer Interview, and a self-report questionnaire, convergent validity is demonstrated by moderately high correlations within each attachment dimension across methods; the average within-dimension correlation was .43. Discriminant validity is indicated by the relatively small correlations between attachment dimensions within methods; the average within-method correlation was -.09.

The Relationship Scales Questionnaire (Bartholomew & Horowitz, 1991)

Bartholomew and Horowitz (1991) have proposed and validated a four-group taxonomy

and self-report measure of adult attachment. By dichotomizing and then cross classifying positive and negative models of self and other, their framework itentifies four attachment styles (Lopez, 1995). The theoretical argument is that attachment styles are defined by two underlying dimensions: models of the self (positive-negative) and models of others (positive-negative). This is a 30-item self-report instrument designed to assess the four attachment styles: secure (positive self/positive other), anxious/preoccupied (negative self/positive other), fearful (negative self/negative other), dismissing (positive self/negative other). Each respondent is asked to make ratings on a 7-point scale of the degree to which they resemble each of the four styles.

LeGrand, Snell and Zlokovich (1994), in an assessment of internal consistency reliability, found Cronbach alphas for females to range from .45 to .58 and for males from .39 to .58. Vacha-Haase et al. (1994) found Cronbach alphas to range from .36 to .57 for the four scales. Intercorrelations of attachment styles (Bartholomew & Horowitz, 1991) indicated negative correlations between Secure and Fearful of -.65 and between Preoccupied and Dismissing of -.37.

Convergent validity was demonstrated by moderately high correlations within each attachment dimension across methods of self-report, family interview and peer interview. The average within dimension correlation was .43. Discriminant validity was indicated by the relatively small correlations between attachment dimensions within methods. The average within-method correlation was -.09 (Griffin & Bartholomew, 1994).

The Measure of Insecure Attachment (West & Sheldon, 1988) is a questionnaire measuring key features of adult attachment, based on concepts of

attachment theory (proximity seeking, separation protest), as well as scales that focus exclusively on pathological patterns of adult attachment. Attachment figure is defined as "a peer who is not a member of the family of origin, with whom there is usually a sexual relationship, and with whom there has been a special relationship for at least six months" (West & Sheldon, 1988, p.155). This instrument is a 40-item self-report designed to assess four attachment characteristics--consisting of four scales: Compulsive Care-seeking, Compulsive Self-reliance, Compulsive Care-giving, and Angry Withdrawal. This instrument is based on a definition of attachment that focuses on reciprocal attachment to a significant other. Cronbach's alpha coefficients for scores on the four scales were from .87 to .88.

Pearson product moment coefficients were computed for each pair of scales. There was a strong positive correlation between Compulsive Self-reliance and Angry Withdrawal (.48), which would indicate distant detached patterns. A strong positive correlation was found as well between Compulsive Care-giving and Compulsive Care-seeking (.57), which would indicate close/enmeshed patterns, indicating congruency with theoretical constructs. There was a negative correlation between the opposing constructs of compulsive care giving and compulsive self-reliance (-.45) and between compulsive care seeking and compulsive self-reliance (-.26).

The Inventory of Parent and Peer Attachment (Armsden & Greenberg, 1987) is a self report measure providing separate assessment of the quality of parent and peer attachment in late adolescents and young adults. The theoretical underpinnings of this measure is based on the affective-cognitive dimensions of trust in the accessibility and

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responsiveness of attachment figures. This instrument is comprised of two scales that are scored independently--the Parent scale (28 items) and the Peer scale (25 items). A factor analysis of the underlying structure indicated three factors were present: Trust, Communication, Alienation. The factor pattern coefficients suggested a partial confirmation of the notion of positive and negative affective/cognitive dimensions of attachment. Intercorrelations among the scales indicated positive correlations between parent trust and communication (.68), and negative correlations between parent trust and alienation (-.55) and between parent communication and alienation (-.59). Similarly, there were positive correlations between peer trust and communication (.65) and negative correlations between peer trust and alienation (-.35) and peer communication and alienation (-.39).

According to Armsden and Greenberg (1987), Cronbach's alpha coefficients internal consistencies for scores on the parent scale were from .86 to .91. Scores on the peer scale had internal consistencies of .72 to .91. Papini, Roggman, and Anderson (1991) reported Cronbach alphas of .88 to .89 for the mother and father subscales. Three week test-retest reliabilities were .93 for the Parent Attachment measure and .86 for the Peer Attachment measure (Armsden & Greenberg, 1987).

Armsden and Greenberg (1987) found IPPA parent attachment scores to be correlated with reported levels of family support, conflict, and cohesiveness, and with the tendency to seek out parents in times of need. Parent attachment scores correlated with five of the six indices of family climate. Highest correlation coefficients were obtained for the FES cohesion and expressiveness scales (.56 and .52, respectively). Family self-

concept, as measured by the TSCS, appeared strongly associated with parent attachment (.78). Peer attachment scores correlated most highly with TSCS Social Self-concept (.57). Peer attachment was not related to the measures of family environment. Peer attachment was equally related to Parent and Peer Utilization factors.

The Parental Bonding Instrument (Parker, Tupling, & Brown, 1979) assesses subjects' retrospective memories of their parents in terms of two major dimensions of parenting: care (general levels of parental warmth and affection) and control (levels of parental control and intrusion versus encouragement of autonomy) (Lopez & Gover, 1993). This instrument was designed to examine the parental contribution to a parent-child bond. Two subscales of care--levels of parental warmth and affection vs. indifference and neglect; and overprotection--levels of parental control and intrusion vs. encouragement of autonomy are assessed. Twenty-five self-report items require respondents to rate each parent separately according to how accurately the item corresponds to memories of parental behavior during the first 16 years of the respondent's life.

Parker (1979) initially reported 3 week test-retest reliability coefficients of .63 to .76 for scores on the two subscales of Overprotection and Care. Split-half score reliabilities of .74 for the Overprotection scale and .88 for the Care scale were also reported. Intercorrelations between the scales involved a negative correlation between Overprotection and Care of -.47 for mothers and -.36 for fathers.

Concurrent validity was assessed correlating raters' independent assignment to participants' parents of care and overprotection scores (based on a previous interview

with the participant) with those of the actual scales. These correlations ranged from .78 for the Care scale to .48 for the Overprotection scale. Evidence for the validity of scores on the PBI as used with nonclinical populations has generally been supportive. Studies have revealed statistically significant relationships between parental representations and (a) current parent-child conflict (Mackinnon et al., 1989); (b) perceptions of social support (Sarason, Sarason, & Shearin, 1986); and (c) counselor-rated working alliance (Mallinckrodt, 1991). The scales may be used separately or together as a bonding instrument.

The Parental Attachment Questionnaire ((Kenny,1987) is a 55-item self-report measure for use with adolescents and young adults. The theoretical framework of attachment is adapted to the later developmental period of individuation and use of the parental figures as a secure base. The PAQ contains three scales: Affective Quality of Relationships, Parental Fostering of Autonomy, and Parental Role in Providing emotional support.

Kenny (1987) reported PAQ internal consistency (Cronbach alpha) coefficients of .93 for men and .95 for women. In a subsequent report, Kelly (1990) reported alpha coefficients of .88 to .96 for scores on the subscales of Relationship Quality, Emotional Support, and Fostering Autonomy. Two-week test-retest stability coefficients were from .82 to .91.

The PAQ Autonomy scale emerged as a modest, though statistically significant, predictor of career-planning progress among women. Among men, the PAQ Emotional Support scale was similarly predictive of career planning. Kenny and Donaldson (1991)

reported that all three PAQ subscales were intercorrelated (.43 to .79) and that each subscale was correlated in expected directions with measures of social competence and psychological functioning. Additionally, the results of this study indicated a negative correlation between the PAQ autonomy scale with an independent measure of parent-adolescent overinvolvement.

The Bell Object Relations Inventory (Bell, Billington, & Becker, 1986) is a self report measure designed to assess various dimensions of object relations. This 45-item measure was standardized on both clinical and non-clinical populations. This instrument yields four factorially derived subscales: Alienation, Insecure Attachment, Egocentricity, and Social Incompetence.

The four subscales have been shown to have a moderately high degree of internal consistency. Coefficient alphas ranged from .78 to .90. Spearman Brown split-half reliabilities ranged from .78 to .90 (Bell et al., 1986).

Bell et al. (1986) reported a high degree of discriminant and concurrent validity for the Bell OR Inventory based on its ability to discriminate previously identified clinical populations and positive correlations with measures of pathology. Heesacker and Neimeyer (1990) reported that higher levels of eating disorder were correlated with higher levels of object relations disturbances along the subscales of Insecure Attachment and Social Incompetence.

Attachment Style Questionnaire (Feeney, Noller, & Hanrahan, 1994) is an attempt to develop a broad-based measure that could be used to clarify issues concerning the dimensions central to adult attachment and the number of styles needed to define

essential individual differences; to design a measure suitable for young adolescents; and to design a measure suitable for those with little or no experience of romantic relationships. A 40-item measure was developed. According to Feeney et al. (1994), factor analysis yielded a 3 factor solution: Security, Avoidance, and Anxiety.

Internal consistencies, as measured by Cronbach's alpha, were .83 to .85. Test-retest reliability coefficients for scores on the three scales over a period of 10 weeks were .74 to .80. Pairwise correlations indicated a negative correlation between Security and Avoidance (-.49) and between Security and Anxiety (-.39). A positive correlation, however, was found between the subscales of Avoidance and Anxiety (.35).

Feeney, Noller, and Hanrahan, using a cluster analysis found a suggestion of relatively distinct attachment groups that can be identified on the basis of the scales. Subjects in the **secure** group had high self-esteem and were confident about their relationships with other people; they were comfortable with closeness and saw relationships as important, without obsessing about them. Members of the **fearful** group lacked confidence in themselves and others, were uncomfortable with being close to others, and worried a lot about their relationships and whether other people approved of them. The members of the **dismissing** group emphasized achievement to the exclusion of relationships; they were reasonably confident in themselves, but uncomfortable with being close with others and somewhat concerned about the approval of others. The subjects in the **preoccupied** group worried a lot about their relationships and whether others approved of them and they emphasized the importance of relationships; they tended to be uncomfortable with closeness, however, and to lack confidence in themselves and others.

The Adult Attachment Interview (AAI) (Kaplan & Main, 1985) is an hour-long semi-structured clinical interview to assess attachment relationships in adults by focusing on the individual's past and present relationships with parents. The underlying theory is that representations of significant others are drawn out of past experiences and influence how present attachment relationships are construed (West et al., 1989). The interview is designed to tap memories of childhood relationships with parents, together with an assessment of the influence of these early relationships on adult personality. Administration and scoring of this instrument require in-depth training.

This is a semistructured interview consisting of 15 questions concerned with global descriptions of past experiences and with specific biographical events. The interviews are transcribed verbatim and rated (a) on scales for childhood experiences as inferred from the subject's descriptions and (b) for current states of mind. On the basis of the various profiles used in the scales, interview transcripts are rated and respondents assigned to one of three categories: secure--their presentation and evaluation of attachment experiences is coherent and consistent; dismissing--they describe their parents in highly positive terms that are unsupported or contradicted; preoccupied--they show a confused, angry, or passive preoccupation with attachment figures.

According to Sagi et al. (1994), a test-retest analysis (3 month delay) indicated highly similar distributions: 69% autonomous, 24% dismissing, 7% preoccupied; 66% autonomous, 24% dismissing, and 10% autonomous. Rater agreement was between 90% and 100%. Additionally, the test-retest stability for scores from all three pairs of raters

across the first and second time of assessment is moderately high: (k=.70 to .89). The general test-retest stability is high (90%, k=.79).

Kobak, Cole, Ferenz-Gillies, and Fleming (1993) used Q-sort prototypes for secure/anxious and deactivating/hyperactivating strategies to differentiate between attachment dimensions. Subjects who had a positive correlation with the security prototype received secure classifications, subjects with negative correlations with the security prototype and positive correlations with the deactivation/hyperactivation prototype received dismissing classifications, and subjects with negative correlations with both the security and deactivation/hyperactivation prototypes received preoccupied classifications. The frequency of agreement between the AAI classifications and the groups derived from the attachment prototypes of secure/anxious and deactivating/hyperactivating strategies produced a kappa of .65, which indicates adequate agreement between the two methods. Seventy-nine percent (79%) (n=53) of the subjects received identical classifications using the two methods.

Summary

The present analysis indicated that the reviewed measures of adult attachment each uniquely reflect different conceptions of adult attachment patterns and testing strategies. According to Bartholomew (1994), self-report measures rely on subjects' abilities to accurately report their expectations and experiences in intimate relationships, whereas interview measures do not assume the same degree of conscious awareness on the part of subjects. The measures differ in the content domains assessed, some focusing on representations of adult-adult relationships, and some focusing on representations of early

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relationships in the family. Measures also differ in the specificity with which attachment representations are defined--from measures assessing the quality of attachment in specific relationships to measures looking at attachment representations across intimate peer relationships in general (Bartholomew, 1991). Some measures assess discrete attachment categories (Hazan & Shaver, 1987), while others yield continuous ratings of discrete patterns (Bartholomew & Horowitz, 1991), and others assess dimensions hypothesized to underlie individual differences in attachment (Collins & Read, 1990).

Attachment in adults is a complex, multidimensional construct. A careful analysis of exactly what is being assessed, as well as the reliability and validity of scores on the instrument, must be determined before a decision regarding instrumentation can be made. The use of self-report instruments assume a certain measure of self-awareness, and may be subject to defensive distortions. It has been suggested that the interview-type measures may be a more sensitive measure of adult attachment. As a result, the use of multiple indicators of attachment in future research has been recommended (Scharfe & Bartholomew, 1994).

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Table 1
Reliability Analysis of Selected Adult Attachment Measures

1. Attachment Style Measure (Hazan & Shaver, 1987)

subscales			internal reliability(Cronbach alpha)	test-retest reliability(2 week)	intercorrelations		
(H & S, 1987)	Study 1	Study 2	(Vacha-Haase, et al, 1994)	(Levy & Davis, 1988)	(H & S, 1987)	Study 1	Study 2
Secure	56%	56%	.45	.48	Secure/Avoidant	-.53	-.66
Avoidant	25%	23%	.80	.58	Secure/Anxious-Amb.	-.12	-.14
Anxious/Amb.	19%	20%	.10	.65	Avoidant/Anxious-Amb.	.04	.10
			(Chongruska, 1994)	(Pistole, 1989)			
Total			.46	.60			

2. Adult Attachment Scale (Collins & Read, 1990)

subscales		internal reliability(Cronbach alpha)		test-retest reliability(2 month)	intercorrelations	
(C & R, 1990)		(C & R, 1990)	Chongruska (1994)	(C & R, 1990)	(C & R, 1990)	
Depend	18%	.75	.85	.71	Anxiety/Depend	-.24
Anxiety	16%	.72	.78	.52	Anxiety/Close	-.08
Close	21%	.69	.85	.68	Close/Depend	.38

3. Attachment Interview (Bartholomew & Horowitz, 1991)

subscales		internal reliability(inter-rater)		intercorrelations	
B & H, 1991)		B & H, 1991)	(G & B, 1994)	B & H, 1991)	
Secure	57%	.75 to .86	.75 to .86	Secure/Fearful	-.65
Dismissing	18%			Preoccupied/Dismissing	-.54
Preoccupied	10%				
Fearful	15%				

4. Relationship Scales Questionnaire (Bartholomew & Horowitz, 1991)

subscales	internal reliability(Cronbach alpha)			intercorrelations	
	(Vacha-Haase, et al, 1994)	Legrand, et al, 1994)		(Bartholomew & Horowitz, 1991)	
		male	female		
Secure	.36	.39 to .58	.45 to .58	Secure/Fearful	-.65
Dismissing	.57			Preoccupied/Dismissing	-.37
Preoccupied	.50				
Fearful	.38				

5. Measure of Insecure Attachment (West & Sheldon, 1988)

subscales	internal reliability(Cronbach alpha)	intercorrelations	
Compulsive Self-Reliance	.87	Self-Reliance/Withdrawal	.48
Compulsive Care-Giving	.87	Self-Reliance/Care-Seeking	-.26
compulsive Care-Seeking	.88	Self-Reliance/Care-Giving	-.45
Angry Withdrawal	.98	Care-Giving/Care-Seeking	.57
		Care-Giving/Withdrawal	-.16
		Care-Seeking/Withdrawal	.09

6. Inventory of Parent & Peer Attachment (Armsden & Greenberg, 1987)

subscales	internal reliability(Cronbach alpha)	test-retest reliability(3 week)	intercorrelations	
Parent		.93	Parent	
Trust	.91		Trust/Communication	.68
Alienation	.86		Trust/Alienation	-.55
Communication	.91		Communication/Alienation	-.59
Peer		.86	Peer	
Trust	.91		Trust/Communication	.65
Alienation	.72		Trust/Alienation	-.35
Communication	.87		Communication/Alienation	-.39

7. Parental Bonding Instrument (Parker, Tupling, & Brown, 1979)

subscales	internal reliability(Split-half)	test-retest reliability(3 week)	intercorrelations	
Care	.88	.76	Care/Overprotection	-.24
Overprotection	.74	.63		

8. Parental Attachment Questionnaire (Kenny, 1987)

subscales	internal reliability(Cronbach alpha)	test-retest reliability(2 week)	intercorrelations
	(Kenny, 1990)		(Kenny & Donaldson, 1991)
Relationship Quality	.96	.82 to .91	All three PAQ scales were intercorrelated
Emotional Support	.88		.43 to .79
FosteringAutonomy	.88		

9. Bell Object Relations Inventory (Bell, Billington, & Becker, 1986)

subscales	internal reliability(Cronbach alpha)	Split-Half Reliability	intercorrelations	
Alienation	.90	.90	Alienation/Egocentricity	.50
Insecure Attachment	.82	.81	Alienation/Social Incompetence	.48
Egocentricity	.78	.78	Insecure/Egocentricity	.42
Social Incompetence	.79	.82	Insecure/Social Incompetence	.33
			Alienation/Insecure	.49
			Egocentricity/Social Incompetence	.21

10. Attachment Style Questionnaire (Feeney, Noller, Hanrahan, 1994)

subscales	internal reliability(Cronbach alpha)	test-retest reliability(10 week)	intercorrelations	
Security	.83	.74	Security/Avoidance	-.49
Avoidance	.83	.75	Security/Anxiety	-.39
Anxiety	.85	.80	Avoidance/Anxiety	.35

11. Adult Attachment Interview (Kaplan & Main, 1985)

subscales		internal reliability(inter-rater)	test-retest reliability
autonomous	69%	90-100%	.87-.90
dismissing	25%		
preoccupied	7%		